CREST Status Report-April 28, 2000

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Activity: Consolidated Reporting of EarthquakeS and Tsunamis (CREST)

1) **Warning Centers:** During the past 6 months there was no activity conducted at the Warnings Centers by CREST project personnel. Essentially, this part of the project is complete.

2) **Seismic Network instrumentation**: Installations of seismic instrumentation continue as weather and equipment inventories permit:

AEIC: Two sites are operational. During past 6 months weather held up new installations. However, equipment is on hand to install 8 stations. During the winter months, data loggers, power generation hardware, and sensors were extensively tested. Problematic equipment was again detected and returned to the manufacturer for repair.

ATWC: Two sites are operational. Sand Point is being scheduled for the summer of 2000 when the weather improves.

NCSN: Three sites are operational, with the most recent site installed in April 2000. A satellite telemetry system was successfully installed with NEHRP and Volcano funding in March 2000, and this system will be used to bring back four additional sites in northernmost California and southern Oregon this fall pending delivery of equipment.

HVO: All three sites were installed in January 2000. This completes the Hawaiian installation

PNSN: Four sites are operational. Telemetry is on order for 2 more sites. Siting efforts continue for 4 other sites.

UO: Two existing sites operated by University of Oregon were upgraded in November 1999. The CTS computer was installed at University of Oregon in Eugene. Data comes into the UofO via ODOT

microwave, and then to the UW via the Internet where it is available to the CREST private network. This completes the UofO installation.

UCB: Quanterra data logger was configured. UCB staff investigated spread -spectrum radio telemetry link from Cahto Peak into Laytonville, CA where Frame Relay service is available. Site installation is on hold pending decision whether to utilize NCSN satellite telemetry from Cahto to Menlo Park. Installation of site, whether at Cahto or elsewhere will occur this summer.

3) **Communications**: The dedicated 128Kbps circuit from HVO to PTWC came up after many months of effort. The effort involved a major reconfiguration of the microwave telemetry from HVO to the Hawaiian Telephone demarcation point at Highway 11. This system carries telephone traffic to the Jaggar Museum, National Park Service and HVO, and also provides HVO access to the Internet. Principally through the efforts of telecommunications staff at the USGS in Menlo Park with support from HVO, National Park Service, and Hawaiian Telephone, the traffic on the microwave system was configured, new equipment installed, and existing communication equipment reprogrammed. This enables PTWC to have access to continuous seismic waveforms for all CREST stations installed at HVO as well as most analog channels.

4) **Algorithms**: ShakeMap implementation is complete in NC and is in test mode.

ML magnitude computation is complete and is in test mode in NC.

Moment tensor code from UCB was delivered in October 1999. Code is being integrated into Earthworm system, but completion date is not known at this time.